

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A digital camera comprising:
a two dimensional image plane within said camera toward which light from a three dimensional image is directed;
a plurality of high resolution sensor arrays spanning a first dimension of said image plane for generating image data, wherein said plurality of sensor arrays are moved through only portions of said second dimension of said image plane to more rapidly complete image data acquisition at discrete intervals along the entirety of said image plane;
an actuator for moving said high resolution sensor arrays through a second dimension of said image plane while said sensor arrays acquire image data at discrete distance intervals of said second dimension, thereby enabling said camera to acquire image data at discrete intervals along an entirety of said image plane; and
a control board for receiving said image data from said sensor arrays.
2. (Canceled)
3. (Original) The digital camera of claim 1, wherein said image is remotely located from said camera.
4. (Original) The digital camera of claim 1, wherein said image changes with time.
5. (Previously Presented) The digital camera of claim 1, wherein each said sensor array comprises:
a charge coupled device.
6. (Original) The digital camera of claim 5, wherein said charge coupled device comprises more than one thousand pixels.
7. (Previously Presented) The digital camera of claim 6, comprising:
a plurality of substantially straight line sensor arrays spanning the first dimension of said image plane; and
a linear actuator for moving said substantially straight line sensor arrays linearly along the second dimension of said image plane.

8. (Original) The digital camera of claim 7, wherein said linear actuator comprises:

an electric motor; and
a belt and pulley system.

9. (Previously Presented) The digital camera of claim 1, comprising:
a rotary actuator for rotating said sensor arrays through the second dimension of said image plane, wherein said rotation enables said sensor arrays to acquire image data at closely spaced intervals across an entirety of said image plane.

10. (Previously Presented) The digital camera of claim 1, wherein said sensor arrays and said actuator are part of a package that has been retrofitted into the digital camera.

11. (Canceled)

12. (Currently Amended) A method for generating digital data in a digital camera, the method comprising:

directing light from a remotely located image toward an image plane within said digital camera, wherein the image plane is a two dimension space in said camera toward which light from said image is directed, said image plane having first and second dimensions;

deploying a plurality of [[said]] high resolution one dimensional sensor arrays which span the first dimension of the image plane across said second dimension of said image plane;

moving each sensor array of said plurality of sensor arrays through a portion of the second dimension of the image plane, wherein each sensor array traverses a portion of the image plane exclusive of at least one other sensor array of the plurality sensor arrays; and

converting light received by said one dimensional sensor arrays into digital image data acquired in two dimensions along of said image plane, and generating two dimensional digital image data.

13. (Original) The method of claim 12, comprising:
transmitting said two dimensional digital image data to a storage device.

14. (Original) The method of claim 12, wherein said remotely located image is three dimensional.

15. (Canceled)

16. (Original) The method of claim 12, wherein said digital image data comprises: brightness information; and color information.

17. (Presently Presented) The method of claim 12, wherein each said sensor array spans a linear dimension of said image plane; and said moving comprises: linearly moving each said sensor array through a second dimension of said image plane thereby enabling acquisition of two dimensional image data across the entirety of said image plane.

18. (Previously Presented) The method of claim 12, wherein each said sensor array spans a linear dimension of said image plane; and said moving comprises: rotating each said sensor array through a second dimension of said image plane thereby enabling acquisition of two dimensional image data across the entirety of said image plane.

19. (Previously Presented) The method of claim 12, said moving comprising: continuously moving each said sensor array through said image plane thereby generating a sequence of digital still images in rapid succession enabling said digital camera to capture moving video image data.

20. (Previously Presented) The method of claim 12, wherein said converting light into digital image data is performed at different rates at different points during travel of said sensor array along said second dimension of said image plane.

21. (Canceled)

22. (Previously Presented) The method of claim 30, wherein the array has a variable sampling rate.

23. (Previously Presented) The method of claim 22, further comprising: changing the sampling rate based upon a characteristic of the two dimensional digital image data.

24. (Previously Presented) The method of claim 22, further comprising:
increasing the sampling rate to process said image data with increased resolution.
25. (Previously Presented) The method of claim 22, further comprising:
changing the sampling rate for at least one point along the image plane.
26. (Previously Presented) The method of claim 30, wherein the sensor array may
be moved at a variable velocity.
27. (Previously Presented) A method for generating two dimensional digital image
data in a digital camera, the method comprising:
directing light from a source toward an image plane within said digital camera, wherein
the image plane having first and second dimensions;
providing a high resolution sensor array which span the first dimension of the image
plane, wherein the sensor array may be moved at a variable velocity;
moving the sensor array through a portion of the second dimension of the image plane;
collecting sampling data samples from the light received by the sensor at a sampling
rate;
processing the data samples into the two dimensional digital image data; and
increasing the variable velocity to accurately process a dynamically changing image.
28. (Previously Presented) The method of claim 30 wherein said image plane
comprise a long dimension and a short dimension wherein said sensor array spans said long
dimension and is moved across the length of said short dimension.
29. (Previously Presented) The method of claim 30 wherein said image plane
comprise a long dimension and a short dimension wherein said sensor array spans said short
dimension and is moved across the length of said long dimension.

30. (Currently Amended) A method for generating two dimensional digital image data in a digital camera, the method comprising:

directing light from a source toward an image plane within said digital camera, wherein the image plane having first and second dimensions;

providing a first and a second high resolution sensor array that span the first dimension of the image plane, wherein the first array is located at a one end of said image plane and the second array is located in a middle of said image plane;

moving each sensor array through a portion of the second dimension of the image plane, wherein the moving comprises:

moving the first array and the second array to the direction of the other end of the image plane at the same time; and

ceasing moving the first array and the second array when the first array is located in the middle of the image plane and the second array is located at the other end of the image plane;

collecting sampling data samples from the light received by the sensor at a sampling rate; and

processing the data samples into the two dimensional digital image data.

31. (Currently Amended) A method for generating two dimensional digital image data in a digital camera, the method comprising:

directing light from a source toward an image plane within said digital camera, wherein the image plane having first and second dimensions;

providing a first and a second high resolution sensor array that span the first dimension of the image plane, wherein first array is located at a ~~[[one]]~~ first end of said image plane and the second array is located in a middle of said image plane;

moving each sensor array through a portion of the second dimension of the image plane, wherein the moving comprises:

moving the first array and said second array toward ~~[[one]]~~ a second end of the image plane ~~and moving the second array toward the other end of the image plane~~ at the same time;

ceasing moving the first array and the second array when the first array is located at ~~the one end~~ said middle of the image plane and the second array is located at ~~the other~~ said second end of the image plane;

collecting sampling data samples from the light received by the sensor at a sampling rate; and

processing the data samples into the two dimensional digital image data.